REMARKS

Applicants respectfully request that the above-identified application be reexamined.

The Office Action mailed on April 21, 2005 ("Office Action") rejected Claims 1-40. In particular, the Office Action rejected Claims 1-19 under 35 U.S.C. § 103(a) as being unpatentable over Warman et al., U.S. Patent No. 5,657,221 (hereinafter "Warman") in view of Humpleman et al., U.S. Patent No. 6,466,971 B1 (hereinafter "Humpleman"). The Office Action also rejected Claim 29 under 35 U.S.C. § 103(a) as being unpatentable over Warman. The Office Action further rejected Claims 20-28 and 30-40 under 35 U.S.C. § 102(b) as being anticipated by Warman.

For the reasons hereinafter set forth, applicants respectfully submit that the rejection of the claims, as amended, in view of the teachings of the cited references, should be withdrawn and this application be allowed.

Prior to discussing in detail why applicants believe that all of the claims in the application are allowable over the applied references, a brief description of applicants' invention and the cited references is provided. The following discussions of the disclosed embodiments of applicants' invention and the teachings of the applied references are not provided to define the scope or interpretation of any of applicants' claims. Instead, such discussed differences are provided to help the U.S. Patent and Trademark Office better appreciate important claim distinctions discussed thereafter.

I.   Summary of the Invention

Embodiments of the invention provide a graphical control system for creating and operating decomposable visual components ("DVCs") in a visual networking operating system ("VNOS"). The DVCs may be related to system elements such as computing devices, non-computing devices and software applications or programs that may be controlled by, observed by

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and/or manipulated by the DVCs. One aspect of the invention provides a method for creating decomposable visual components in the visual networking operating system. The method includes providing a library of visual component templates, which can be used to instantiate decomposable visual components. The instantiated decomposable visual components can be configured while their operation is displayed in a user interface. Preferably, multiple DVCs are instantiated and connected such that a value in one DVC is communicated to another DVC.

Another aspect of the invention provides a user modifiable control DVC. The modifications are communicated to one or more target DVCs within the VNOS system. The target DVC(s) detects the modifications and effectuates a corresponding change in the target DVC(s).

As can be readily appreciated from the foregoing summary, embodiments of the invention provide a graphical control system for creating and manipulating decomposable visual components representing system elements and the relationships between those elements. The graphical control system also eliminates the need for custom coding when communicating or observing changes in a system element. In addition, the graphical control system employs an efficient object-oriented paradigm that can be used to build complex and/or decomposable visual components.

II. Summary of References Cited

A. Summary of Warman

Warman discloses a graphical control system for controlling non-computer system devices. Non-computer system devices include any electronic device equipped with the necessary hardware to be either directly or indirectly controlled by a computer, including a simple on/off switch. Such devices include musical amplifiers and equalizers, television sets, VCRs, video cameras, etc.

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In Warman, the graphical control system includes a computer, and a device interface for each non-computer system device having at least one feature control. The graphical control system also includes a coupling medium for coupling the computer to the device interface and a visual network operating system ("VNOS"). The device interface connects the non-computer system device to the coupling medium and provides a mechanism for converting commands generated by the computer into signals for controlling the operation of the non-computer system device. Warman discloses that the device interface is a hardware interface comprising an I/O board and a processor board allowing the device to be directly connected to a bus network for transmitting communications from and to the device.

In Warman, the VNOS is a distributed operating system that is partially stored in the computer and partially stored in the device interface. The computer portion of the VNOS causes the computer to generate or create visual device controls that visually represent feature controls normally associated with the non-computer system device. Feature controls can be internal or external to the device and are used to control and monitor the operation of the device. Typical feature controls include, but are not limited to, volume controls, channel selectors, power switches, input and output meters, etc. For example, if the non-computer system device is a music amplifier, the type of feature controls normally associated with the music amplifier may include an on/off switch, an input meter, and a volume control. In Warman, a conventional graphical control device such as a mouse or a trackball may operate a visual device control, which in turn causes the computer to send messages to the corresponding device interface. The device interface then causes the non-computer system device to respond in the same way that the device would have responded to the menu or electronic operation of the equivalent feature control. Warman does not teach or suggest that, when a first visual component is being modified to generate a change, the change is communicated to a second visual component, which then

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effectuates the change in the second visual component, as recited in Claim 20 of the present application and discussed more fully below.

B.   Summary of Humpleman

Humpleman purportedly discloses a method and system for commanding and controlling a plurality of devices via a network. In essence, Humpleman discloses connecting a first device and a second device to a network. The second device stores application interface description data in a structured format. The application interface description data is used by devices in the network to command and control the second device. For example, Humpleman discloses providing the application interface description data to the first device over the network. The first device then utilizes the application interface description data to control the operation of the second device by sending control and command data to the second device over the network.

Humpleman discloses that the application interface description data may include remote procedure call information for the first device to control the operation of the second device. Humpleman also discloses that the application interface description data may include capabilities data for identifying the capabilities of the second device. The application interface description data can be stored in a structured format such as XML format. Preferably, each of the plurality of devices connected to the network contains application interface description data in the structured format for commanding and controlling of the device by one or more other devices connected to the network.

In summary, Humpleman discloses commanding and controlling devices via a network by allowing a first device to control and command a second device through utilizing application interface description data associated with the second device. Nowhere does Humpleman teach or suggest the subject matter disclosed by applicants' invention. For example, nowhere does Humpleman teach or suggest providing a library of visual component templates, each of which

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can be instantiated into a configurable and decomposable visual component, as recited in Claim 1 of the present application and discussed more fully below..

III.   Objection and Rejections of Claims

A.   Claim Objections

The Office Action objected to Claim 23 because of an informality. Applicants agree with this objection and have accordingly corrected the informality in Claim 23.

B.   Rejections of Independent Claim 1 and Its Dependent Claims 2-19 Under 35 U.S.C. § 103(a)

The Office Action rejected independent Claim 1 and its dependent Claims 2-19 under 35 U.S.C. § 103(a) as being unpatentable over Warman in view of Humpleman. Applicants respectfully disagree because the cited references, taken alone or combined, fail to teach the subject matter recited in these claims. In particular, the cited references, taken alone or combined, fail to teach subject matter recited in independent Claim 1, from which Claims 2-19 depend.

In its present form, Claim 1 reads as follows:

> 1.   A method of creating a decomposable visual component in a visual networking operating system, the method comprising:
>
> providing a library of visual component templates;
>
> instantiating the decomposable visual component from said library; and
>
> configuring the decomposable visual component while said decomposable visual component is operating.

Claim 1 therefore recites providing a library of visual component templates. The Office Action correctly concludes that Warman fails to teach a library of visual components. However, the Office Action incorrectly concludes that Humpleman makes up such a deficiency. Applicants have been unable to locate any pertinent subject matter in the portions of Humpleman

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(Col. 7, lines 55-59; Col. 15, lines 29-41; Col. 17, lines 7-29; Col. 21, lines 3-20) referenced in the Office Action. In these portions of Humpleman, Humpleman teaches a command language interface and a library of **commands**, wherein the commands can be utilized by a device to send and receive information. Nowhere does Humpleman teach providing a library of **visual component templates** as recited in Claim 1. As known by those of ordinary skill in the art and as described in applicants' patent application (page 6, line 17-page 7, line 3), templates, i.e., classes, are abstract generic descriptions of objects and their behaviors. When implemented as a class, a template defines a certain category or grouping of methods and data within an object such as a visual component. Therefore, the library of visual component templates recited in Claim 1 includes abstract generic descriptions of visual components and their behaviors. On the contrary, Humpleman teaches a library of commands that a device may utilize to send and receive information for providing its service. See Humpleman, Col. 7, lines 55-59. As known by those of ordinary skill in the art, a command is an instruction to a computer program that, when issued, causes an action to be carried out. Thus, a command is not a template for an object or component. Therefore, nowhere does Humpleman teach a library of visual component templates that provide abstract generic descriptions of visual components and their behaviors.

Therefore, the cited references, taken alone or combined, do not teach the subject matter recited in independent Claim 1. Applicants thus respectfully submit that the rejection of Claim 1 was in error and Claim 1 is in condition for allowance. As a result, Claims 2-19, the claims that directly or indirectly depend from Claim 1, are submitted to be in condition for allowance for the same reasons that Claim 1 is in condition for allowance.

C.   Rejections of Claims 20-28 and 30-40 Under 35 U.S.C. § 102(b)

The Office Action rejected Claims 20-28 and 30-40 under 35 U.S.C. § 102(b) as being anticipated by Warman. Applicants respectfully disagree.

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In its present form, Claim 20 reads as follows:

> 20. (Original) A method for controlling a target decomposable visual component within a visual networking operating system, the method comprising:
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> depicting a control decomposable visual component;
>
> enabling a user to modify said control decomposable visual component so as to generate a change in a first value;
>
> communicating the change in said first value to the target decomposable visual component;
>
> the target decomposable visual component detecting the change in said first value and effectuating a change in a second value; and
>
> said change in said second value effectuating a change in the target decomposable visual component.

Claim 20 clearly recites two different decomposable visual components: a control decomposable visual component and a target decomposable visual component. While Warman may teach a control decomposable visual component, Warman does not teach a target decomposable visual component. Applicants have not been able to find any pertinent subject matter in the portions of Warman (Figure 1; Abstract; Col. 12, lines 5-29) referenced in the Office Action concerning a target decomposable visual component. In these portions of Warman, Warman teaches three non-computer system devices 21 that are connected to the personal computer 20 via the bus network 28. Nowhere is a target decomposable visual component mentioned in these portions of text. In summary, while Warman may teach a control decomposable visual component, Warman does not teach a target decomposable visual component, both of which are recited in Claim 20. Nor does Warman teach the claim elements recited in Claim 20 concerning the target decomposable visual component, i.e., "communicating the change in said first value to the target decomposable visual component; the target decomposable visual component detecting the change in said first value and effectuating a

change in a second value; and said change in said second value effectuating a change in the target decomposable visual component."

As a result, Warman does not teach the subject matter recited in independent Claim 20. Applicants thus respectfully submit that the rejection of Claim 20 was in error and Claim 20 is in condition for allowance. As a result, Claims 21-36, the claims that directly or indirectly depend from Claim 20, are submitted to be in condition for allowance for the same reasons that Claim 20 is in condition for allowance.

Claim 37 recites a computer readable medium containing computer executable instructions for performing any of the methods recited in Claims 1-19. Therefore, Claim 37 is submitted to be allowable for the same reasons that Claims 1-19 are allowable. Similarly, Claim 39 recites a computer apparatus operative to execute instructions for performing any of the methods of Claims 1-19. Therefore, Claim 39 is submitted to be allowable for the same reasons that Claims 1-19 are allowable.

Claim 38 recites a computer readable medium containing computer executable instructions for performing any of the methods recited in Claims 20-36. Therefore, Claim 38 is submitted to be allowable for the same reasons that Claims 20-36 are allowable. Similarly, Claim 40 recites a computer apparatus operative to execute instructions for performing any of the methods of Claims 20-36. Therefore, Claim 40 is submitted to be allowable for the same reasons that Claims 20-36 are allowable.

<div align="center">CONCLUSION</div>

In view of the foregoing comments, applicants respectfully submit that all of the claims in this application are clearly allowable in view of the cited and applied references. Consequently, early and favorable action allowing these claims and passing this application to
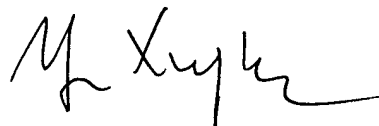
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issue is respectfully solicited. If the Examiner has any remaining questions, the Examiner is invited to contact applicants' attorney at the number set forth below.

Respectfully submitted,

CHRISTENSEN O'CONNOR
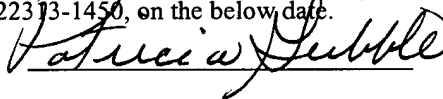JOHNSON KINDNESS^{PLLC}

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